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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY/DOCKET NO.	CONFIRMATION NO.
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Junji Hirokane

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EXAMINER

WATKO, JULIE ANNE

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,865

Applicant(s)

HIROKANE ET AL.

Examiner

Julie Anne Watko

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) 3,8-13,19-21,26,27 and 29-61 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,14-18,22-25 and 28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5,7,9.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of 1-2, 4-7, 14-18, 22-25 and 28 in Paper No. 13, filed April 8, 2004, is acknowledged. Claims 1, 4, 22 and 28 are currently generic.
2. Claims 3, 8-13, 19-21, 26-27, 29-31 and 40-61 are withdrawn from consideration as drawn to non-elected species. It is noted by the Examiner that Applicant has not identified claim 40 as readable on the elected species.
3. An error appears in paper no. 12, mailed March 10, 2004. On page 2, the office action acknowledges election without traverse of "claims 32-39". This should be an acknowledgment of election without traverse of --claims 1-31 and 40-61--. The Examiner apologizes for this error and any confusion caused thereby. Claims 32-39 are withdrawn from consideration as drawn to a non-elected invention.

Drawings

4. The drawings were received on April 8, 2004. These drawings are acceptable.

Specification

5. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention and species to which the elected claims are directed.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Zijp (US Pat. No. 6108292).

As recited in claim 1, Zijp shows a recording and reproducing device which includes a light source, focusing means (including 110 and 109a1) for converging and projecting a laser beam 7a which was emitted from the light source 7 on a disk, and rotation driving means for rotating the disk, said recording and reproducing device comprising: a stabilizing board 109b1, provided between the disk and the focusing means, which is moved with the focusing means.

As recited in claim 2, Zijp shows that said stabilizing board is (inherently) transparent.

8. Claims 5 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Mamin et al (US Pat. No. 5497359).

As recited in claim 5, Mamin et al show a recording and reproducing device (see Figs. 4-6) which records and reproduces information by projecting a laser beam on a disk 12' being rotated, said recording and reproducing device comprising: a stabilizing slider 100 which is disposed to face the disk and is supported to oscillate (see suspension 27), a surface 110 of said stabilizing slider facing the disk being flat.

As recited in claim 22, Mamin et al show a recording and reproducing device which includes an optical pickup (including 102) for recording and reproducing information by projecting a laser beam on a disk 12' being rotated, said recording and reproducing device

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comprising: a stabilizing board 100, provided with the optical pickup (including 102), which is disposed to face the disk 12' when the disk is rotating.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zijp (US Pat. No. 6108292) in view of Imamura et al (US Pat. No. 5189574).

Zijp shows a recording and reproducing device as described above for claims 1-2.

As recited in claim 4, Zijp is silent regarding whether said disk is flexible.

As recited in claim 4, Imamura et al show that a disk 1 is flexible.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make flexible the disk of Zijp as taught by Imamura et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to make the disk flexible in

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order to reduce a moment of inertia so as to eliminate a need for a large spindle motor, and to reduce a rising time for disk rotation, so as to achieve a small, light and low-cost apparatus with high storage density and high speed access as taught by Imamura et al (see col. 1, lines 16-36).

12. Claims 6-7 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mamin et al (US Pat. No. 5497359) in view of Watanabe et al (US Pat. No. 6404705 B1).

Mamin et al show a recording and reproducing device as described above for claims 5 and 22.

As recited in claim 6, Mamin et al are silent regarding a stabilizing board which is disposed to face said stabilizing slider via the disk.

As recited in claim 6, Watanabe et al show a stabilizing board 4 which is disposed to face a optical pickup 1 via a disk 7.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the stabilizing board 4 disposed to face the stabilizing slider and optical pickup of Mamin et al as taught by Watanabe et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to dispose the stabilizing board to face the stabilizing slider and optical pickup in order to apply a magnetic field to the disk so as to perform magneto-optical recording or erasing as taught by Watanabe et al (see col. 1, lines 24-30).

As recited in claims 7 and 23-24, Mamin et al are silent regarding whether said stabilizing board is a slider which is supported to oscillate and has a flat surface facing said stabilizing slider.

As recited in claims 7 and 23-24, Watanabe et al show that the stabilizing board 4 is a slider which is supported to oscillate (see gimbal spring 5) and has a flat surface facing the optical pickup 1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to support the slider with a flat surface to oscillate as taught by Watanabe et al and as is notoriously well known in the art. The rationale is as follows: one of ordinary skill in the art would have been motivated to support the slider with a flat surface to oscillate in order to provide an air bearing such that the slider flies over the disk as notoriously well known in the art.

As recited in claim 25, Mamin et al are silent regarding whether said stabilizing slider includes a magnetic field generating element for generating a magnetic field.

As recited in claim 25, Watanabe et al show that said stabilizing slider includes a magnetic field generating element 2 for generating a magnetic field.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the magnetic field generating element as taught by Watanabe et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to include the magnetic field generating element in order to record data on the disk by applying an external magnetic field to the disk so as to perform magneto-optical recording as taught by Watanabe et al (see col. 1, lines 21-23).

13. Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zijp (US Pat. No. 6108292) in view of Watanabe et al (US Pat. No. 6404705 B1).

As recited in claim 14, Zijp shows a recording and reproducing device which includes a light source 7, focusing means (including 8b and (109a1 or 209a1)) for converging and

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projecting a laser beam which was emitted from the light source on a disk (101a or 201), and rotation driving means 5a for rotating the disk, said recording and reproducing device comprising: a first stabilizing board (115 or 215), provided between the disk and the focusing means, which is moved with the focusing means (via 110).

As recited in claim 14, Zijp is silent regarding a slider which is disposed to face said first stabilizing board via the disk and is supported to oscillate, a surface of said slider facing the disk being flat.

As recited in claim 14, Watanabe et al show a slider 4 which is disposed to face an optical pickup 1 via the disk and is supported to oscillate (see 5), a surface of said slider facing the disk being flat (see Fig. 1a, for example).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the flat slider of Watanabe et al to the device of Zijp opposite the optical pickup and stabilizing board as taught by Watanabe et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to add the flat slider to the device in order to perform magneto-optical recording as taught by Watanabe et al (see col. 1, lines 24-30).

As recited in claim 15, Zijp shows that said first stabilizing board 215 is fixed to the focusing means (including 209a1) via an elastic member 224 having elasticity.

As recited in claim 16, Zijp shows that the focusing means is a complex lens which is composed of at least two lenses (8b and 9a1, for example; see Fig. 1).

As recited in claim 17, Zijp is silent regarding whether said slider includes a magnetic field generating element for generating a magnetic field.

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As recited in claim 17, Watanabe et al show that the slider 4 includes a magnetic field generating element 2 for generating a magnetic field.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the magnetic field generating element as taught by Watanabe et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to include the magnetic field generating element in order to record data on the disk by applying an external magnetic field to the disk so as to perform magneto-optical recording as taught by Watanabe et al (see col. 1, lines 21-23).

As recited in claim 18, Zijp shows that said first stabilizing board (including 209b1) is transparent.

14. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mamin et al (US Pat. No. 5497359) in view of Imamura et al (US Pat. No. 5189574).

Mamin et al show a device as described above for claim 22.

As recited in claim 28, Mamin et al are silent regarding whether the disk is flexible.

As recited in claim 28, Imamura et al show that a disk 1 is flexible.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make flexible the disk of Mamin et al as taught by Imamura et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to make the disk flexible in order to reduce a moment of inertia so as to eliminate a need for a large spindle motor, and to reduce a rising time for disk rotation, so as to achieve a small, light and low-cost apparatus with high storage density and high speed access as taught by Imamura et al (see col. 1, lines 16-36).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Howe et al (US Pat. No. 4530082) show stabilizing reference surface 34 for rotating disc 13. Nomiyama et al (US Pat. No. 5247503) show an optical recording and reproducing apparatus wherein "floating slider 6 is connected to a movable section body 25 via an unillustrated leaf spring". Yamamoto et al (Jpn. J. Appl. Phys. Vol. 36 (1997) Pt. 1, No. 1B, pp. 456-459) show an optical disk pickup comprising lenses and actuators (see especially Fig. 1).

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julie Anne Watko whose telephone number is (703) 305-7742. The examiner can normally be reached on Sat & Mon until 9PM, Wed & Fri until 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Julie Anne Watko
Primary Examiner
Art Unit 2652

April 24, 2004
JAW

